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NURSING SECTION

Multidisciplinary approach in training a blind patient for continuous ambulatory peritoneal dialysis

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ABSTRACT

Patients with diabetic nephropathy starting on continuous ambulatory peritoneal dialysis (CAPD) may also suffer from blindness. Training of this group of patients for CAPD could be challenging for renal nurses. We have demonstrated that the training of a blind patient for CAPD is not impossible with the use of UV-Flash TM Germicidal Exchange Device. A multidisciplinary team including the chaplain, medical social worker, occupational therapist and physiotherapist should be invo1ved in preparing a patient for CAPD training. A full assessment from the team to identify the physical, social, psychological and spiritual problems, together with the possible interventions by appropriate disciplines is required for the training to be successful.

Key words: Multidiseiplinary, Blind, Continuous ambulatory peritoneal dialyisis

中文摘要

進行連續活動性腹膜透析(CAPD)的糖尿病腎病患者可能同時深受盲視之苦。對此群進行連續活動性腹膜透析治療患者的培訓是對腎科護士的挑戰。培訓經驗證明利用UV-Flash TM殺菌交換儀培訓盲人患者接受連續活動性腹膜透析治療已成為可能。院牧、醫務社工、職業治療師與物理治療師應積極參與培訓前準備。為確保培訓的成功進行，需要對患者的身、心、社、靈各方面進行充分評估，並需要相關科系的積極參與。

INTRODUCTION

Diabetic nephropathy is a common cause of end-stage renal failure (ESRF). There is a rising trend in the number of diabetic patients starting on renal replacement therapy (RRT). In the Hong Kong Renal Registry Report 1998, 29% of the new patients starting on RRT had diabetic nephropathy (1). Unfortunately, some patients simultaneously suffered from blindness due to diabetic retinopathy. In situation where helper is not available for Continuous Ambulatory Peritoneal Dialysis (CAPD), these patients encounter major difficulties in performing CAPD by themselves.

Adaptation to blindness, renal failure and dialysis is a stressful event for patients. It has been reported in a research that stressors identified by Chinese patients undergoing CAPD are mostly psychosocial (2). For patients complicated with diabetic retinopathy with the loss of vision, it is not difficult to imagine that the coping process is indeed difficult. Teaching this group of patients to perform CAPD could be challenging to renal nurses.

Case History

CW, a 48-year-old man, had just lost his vision for 3 months when he was diagnosed to have ESRD due to diabetic nephropathy. He had diabetes mellitus since the age of 42. His visual acuity deteriorated due to diabetic retinopathy at the age of 47. He had been on insulin injection with the help of his second son. CW finally lost his vision when the retinopathy involved the macula, complicating with severe cataract. Ophthalmologist was consulted, but the condition was irreversible. He was transferred to our center soon after a Tenchkoff catheter was inserted for long-term peritoneal dialysis.

Although his physical condition was bad, CW was

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mentally and cognitively sound with good memory. Loss of vision had brought him a mixed feeling of helplessness, anxiety and depression. He was used to live a socially active life. However, with the blindness, he could not walk without help, and he needed to rely on others even with his meal. Grievance and annoyance replaced pleasure and enjoyment in life. Coping was worsened when he knew that his kidneys failed and he needed dialysis.

CW was divorced and was living with three boys at their teens in a public housing unit. He used to be a hairdresser but had stopped working for a few years. The only source of income was from Comprehensive Social Security Assistance. The relationship between CW and his sons was fair except his second son, who was the only source of support for him. However, due to schooling and working, none of the children can be a helper for CW's CAPD.

It showed that being blindness and having diabetes are not contraindications for CAPD treatment (3). With no previous experience in training blind patients for CAPD, we decided to work this out for CW when there was no alternative.

Multidisciplinary Involvement in Preparation for CW's Training

A full assessment was carried out to identify CW's physical, psychological, social and spiritual problems with appropriate interventions provided from chaplains, medical social workers, occupational therapists and physiotherapists.

Psychosocial and Spiritual Support

Besides the psychological support from nurses, medical social worker explored the psychological and social needs of CW. The problem of inadequate support from the family and community for CW was identified. Follow-up interview session with CW and his family for arrangement of appropriate social support for him was conducted.

With the help of chaplain, the spiritual needs of love and belonged were identified. Chaplain also helped CW to cope with his emotional disturbance. When CW released his suppressed feeling of loneliness, being deserted and grievance, chaplain was playing the supportive role and helped CW find the source to satisfy his spiritual needs.

With the support from chaplains and medical social workers, CW was going to accept his illness and cope with the multiple changes in life. It was about 3 weeks CW became more emotionally stable.

CW's second child was supportive with frequent visits when CW was in hospital. We introduced a blind patient on dialysis to CW so that they could share their experience and feeling.

With the help from various parties, CW had finally accepted his condition and was willing to learn CAPD on his own.

Support from Physiotherapists and Occupational Therapists

In the early stage, as CW was still adapting to the loss of vision, he was not able to co-ordinate well. At the same time, he had developed the habit of getting an object very close to his eyes, hoping to see things more clearly. However, such a habit has increased his feeling of disappointment and frustration.

For sorting the problem, the occupational therapist taught CW to use his sense of touch to recognize an object and the spatial relationship between the object and he. CW was then trained for co-ordination through repeated practice. While CW had learned to use his sense of touch, he also became familiar with the shape of the different parts of the CAPD system and the UV-FlashTM Germicidal Exchange Device. As these were done while he was under training by occupational therapists over two weeks.

Although there was no particular problem with CW's hand movement, the physiotherapists also trained CW to improve the fine movement of his fingers to compensate for his loss of vision.

Training CW for CAPD

It was August, without schooling, the second son managed to accompany his father to the Centre for training. A renal nurse was assigned to train CW throughout the whole process with the use of UV-FlashTM Germicidal Exchange Device for the CAPD exchange procedure.

We allowed ample time for training. It took two weeks to train CW to be able to perform the CAPD exchange procedure. As he is not able to see, exit site care is performed by his son after training. Education on theory and knowledge about CAPD, and advice on diet by dietitian were provided during the training period. There was no difficulty for CW to learn cognitively.

Finally, CW passed the assessment for CAPD with the assistance of his son in doing the exit site care and cleansing the equipment. We managed to let CW go home to practice CAPD by himself after a total of 5 weeks' preparation and training.

On Completion of Training

We arranged a home visit on the next day of CW's completion his training. We helped CW to set up the working area for CAPD and assessed his performance in his home setting. Regular phone contact by nurses from the Renal Dialysis Unit with CW helped to assess the progress as well as to show our support.

As CW is not able to see, he cannot take blood pressure readings, check the body weight and the appearance of the peritoneal dialysis (PD) effluent. For overcoming these difficulties, CW weighs himself when his son is around. The blood pressure readings are retrieved later from the blood pressure machine memory, and all the PD effluent is left for checking by his sons.

The family lives in a 500 square feet public housing unit with two bedrooms. The unit is accessible by lift. The furnishings of the unit are acceptable for CW's daily living and CAPD treatment. Except the home hygiene needed improvement, there is no particular problem was identified for CW's daily living with his blindness and CAPD during the visitation. .

As CW is unable to shop and cook his meal, he relies on his youngest son who finish school at noon for lunch. Listening to radio is the main interest for him. Going to the park in the housing estate is what he likes to do everyday.

DISCUSSION

In recent years, twin bag system is becoming more and more popular among patients on CAPD. It has the advantage of convenience of need not to carry a bag together and hence to reduce the incidence of peritonitis. However, this technique does not benefit the blind patients. For blind patients practicing CAPD by themselves, UV-FlashTM Germicidal Exchange Device (Baxter Healthcare Corporation, USA) is the only choice that can do the critical step of connecting the bag without contamination during bag exchange.

While the invention of the UV-FlashTM Germicidal Exchange Device receives high acceptance by the health care workers for its contribution to the group with poor eye-sight or hand coordination, performing CAPD with a UV-FlashTM Germicidal Exchange Device is not as simple and easy as twin bag system. Patients need to get familiar with the parts and the grooves of the device, as well as the shape and position of the various connecting parts of the system. Training patients to use the device for CAPD requires extra time and effort in comparison with other CAPD systems.

Multidisciplinary team should be involved in preparation for a blind patient for CAPD training. A full assessment to identify patients' physical, social, psychological and spiritual problems, together with the possible interventions by appropriate disciplines are required. This requires a lot of direct communication within the team during the whole process.

Acceptance of blindness, renal failure and dialysis is the prime necessity in getting the patients to help themselves. Renal nurses can provide psychological support through interview and counseling. Medical social workers can help to identify the psychosocial needs and explore any possible source of help to meet the patients' needs. Chaplain plays a role to identify the patients' spiritual needs and helps them to explore support for the needs.

Patients' hand function and coordination can be assessed by occupational therapists and physiotherapists. Appropriate training of hand function to compensate for the deficit of blindness is helpful for training the patients for practicing the CAPD procedure. The CAPD system and the UV-FlashTM Germicidal Exchange Device can be used for training the patients' sense of touch, which also help patient to get familiar with the equipment and accessory for the procedure.

In teaching CW to perform CAPD, we also learned how to be a successful trainer in training a blind patient. After evaluation, we identified a few points that are essential for a successful training.

The training nurses should be prepared for coming across the difficulty and trouble that they may tackle. This involves major empathy and understanding. Extra time, effort, patience and tolerance are required, particularly when the patient learns very slowly. Only the supportive and encouraging attitude can help to build up the confidence of the patients.

The training nurses should try to experience the procedure of bag exchange as if they are blind. This experience can help them to understand the patients' feeling of processing the exchange procedure. With the experience, the trainers can also know the difference of training a patient with and without vision. It can help to

minimize the frustration of both parties.

The training nurses should take a position as a facilitator during the patient's learning process. The individuality of the patients should be regarded and continuous assessments on the process are required for modification of steps to suit the patients' needs. Patients should be encouraged to participate the learning process actively, with their feelings and suggestions attended to.

A positive attitude and acceptance of the treatment, encouragement and psychological support from the family are essential for CW's successful CAPD, particularly after his discharge from hospital.

CONCLUSION

Training a blind patient for CAPD is a real challenge. The experience of training CW proves that it is not impossible for a blind patient to do CAPD with the UV-FlashTM Germicidal Exchange Device.

Patients' acceptance of the responsibility and willingness to learn are of paramount importance. Multidisciplinary effort from occupational therapists, physiotherapists, medical social workers, chaplains as well as renal nurses is necessary for a successful training. Initial and continuous assessments, problem identification, planning, empathy, understanding, psychological support and encouragement by staffs are important elements for a successful training. Support from family in both physical and psychological aspects is important during and after training.

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